Syllabus
MSNE 580/CHEM 580 – Microscopy Methods Spring 2017

Instructor Information
Instructor: Prof. Emilie Ringe
Office Location: GRB E200J
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Grading: standard letter
Office Hours: after class and by appointment

Textbook
Williams & Carter, *Transmission Electron Microscopy: A Textbook for Materials Science, Second Edition*

Course Identification
Course Name: Microscopy Methods
Meeting times: W & F 1:00-2:15PM
Location: TBD

Course Description and Objectives
Lecture course covering basic and advanced electron-based techniques, instrumentation, and image interpretation. Topics include imaging (SEM/TEM/STEM), diffraction, tomography, in-situ techniques, and time-resolved approaches. Also includes several classes on spectroscopy and analytical techniques (EDS/EELS/CL). The theoretical understanding gained by students will help them understand/interpret published and research data as well as design electron microscopy experiments.

Open to all graduate and senior undergraduates, permission required, contact the instructor. Experience on electron microscope recommended but not strictly necessary for lecture component.
Can be taken concurrently with MSNE582 (EMC Lab)

Evaluation and Grade Policy
Evaluation based on pre-lecture question sets, literature searches, special topic presentations, and exams.

Any student with a disability requiring accommodations in this class is encouraged to contact the instructor. Additionally, students should contact the coordinator for Disabled Student Services in Allen Center.